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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,497	06/24/2003	Cesar A. Galindo-Legaria	MSFT-1745/301561.01	2216

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EXAMINER
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MORRISON, JAY A

ART UNIT	PAPER NUMBER
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2168

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/602,497	<b>Applicant(s)</b> GALINDO-LEGARIA ET AL.	
	<b>Examiner</b> Jay A. Morrison	<b>Art Unit</b> 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicants arguments filed on 3/22/06. Claims 1-20 are pending for examination.

The rejection under 35 U.S.C. 112, second paragraph, to claims 1-20, as being incomplete for omitting essential elements, has been removed with respect to Applicants amended claims 1,8, and 15. Examiner notes that in light of the amendments, the Office has made additional rejections under 35 U.S.C. 112, second paragraph.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1,8,15, the phrase "if" or "may be", as in the last line of the claims, respectively, renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claims 2-7,9-14,16-20, they are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite by virtue of dependency on claims respectively rejected under 35 U.S.C. 112, second paragraph.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6 and 8-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Liu et al. ("Continual Queries for Internet Scale Event-Driven Information Delivery").

With respect to claim 1, Liu teaches a method for notifying a client of a change to data stored at a database, the method comprising:

"receiving a subscription from the client, the subscription selecting a first subset of data from within a set of data" (page 613, first column, seventh paragraph [second example], whereas Liu's notification request is equivalent to the claimed subscription from client);

"generating a subscription plan for filtering the first subset from within the set of data" (page 612, second column, third paragraph, whereas Liu's query Q is equivalent to the claimed subscription plan for filtering);

"receiving a query to be executed at the database, the query changing a second subset of data within the set of data" (page 612, second column, fifth paragraph, whereas Liu's database operations are equivalent to the claimed query received which changes the second subset of data);

"generating a query plan for executing the query, the query plan for filtering the second subset from within the set of data" (page 612, second column, third paragraph, whereas Liu's new update is equivalent to the claimed received query plan for filtering);

"matching the subscription to the query based on the set of data" (page 612, second column, second and third paragraphs, whereas Liu's subsequent executions of Q being performed when a new update occurs and trigger becomes true is equivalent to the claimed matching subscription to the query);

"supplementing the query plan with the subscription plan" (page 615, second column, third paragraph, whereas Liu's omitting the FROM clause when the condition is defined over the same objects as the query component is equivalent to the claimed supplementing of the query plan with subscription plan);

"evaluating the supplemented query plan whereby the query changes the second subset of data and the subscription filters the first subset of data from within the second subset of data to form a third subset of data" (page 612, second column, third paragraph, whereas Liu's run of Q over present data is equivalent to the claimed first subset of data and Liu's subsequent execution of Q performed when a new update occurs are equivalent to the claimed second subset of data);

“determining whether the third subset of data is non-empty; if the third subset of data is non-empty, then generating a notification of the change to the third subset of data” (page 612, second column, third paragraph, whereas Liu’s only new query matches since the previous execution being returned to the user is equivalent to the claimed determination of whether the third subset is non-empty and returning that non-empty subset to the user);

“if the third subset of data is empty, then not generating a notification of the change to the third subset of data” (optionally recited limitations are not required to be taught by the Office, see MPEP § 2106 Section II(C)).

With respect to claim 2,

Liu teaches “terminating the subscription” (page 611, second column, second paragraph, whereas Liu’s destruction of observation objects is equivalent to the claimed termination of the subscription).

With respect to claim 3,

Liu discloses “persisting the subscription” (page 611, first column, first paragraph, whereas Liu’s query system which includes future data is equivalent to the claimed persisting subscription).

With respect to claim 4,

Liu discloses “storing the subscription plan at a notification manager” (page 611, second column, third and fourth paragraphs, whereas Liu’s query specification language in the notification model is equivalent to the claimed storage of subscription plan at notification manager).

With respect to claim 5,

Liu discloses “changing the second subset of data at the database” (page 612, second column, fifth paragraph, whereas Liu’s update database operation is equivalent to the claimed changing of the second subset of data).

With respect to claim 6,

Liu discloses “submitting the notification to the client” (page 611, second column, third paragraph, whereas Liu’s users or applications receiving notifications is equivalent to the claimed submitting of notification to client).

With respect to claims 8-13,

These claims are rejected on grounds corresponding to the arguments given above for rejected claims 1-6 and are similarly rejected.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7,14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. ("Continual Queries for Internet Scale Event-Driven Information Delivery") in view of Zollinger et al., US Patent 6,321,236.

With respect to claim 7,

Liu does not explicitly indicate "changing the third subset of data at the client."

However, Zollinger teaches "changing the third subset of data at the client" (column 9, lines 3-20, whereas Zollinger's applying updates to the client copy of the database table is equivalent to the claimed changing of the subset of data at the client).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Liu and Zollinger because using the steps "changing the third subset of data at the client" would have given those skilled in the art the tools to improve the invention by allowing the client to update his local data with only the changes which have occurred at the server. This gives the user the advantage of being able to have the ability to stay current with data changes have been made at the server.

With respect to claim 14,

This claim is rejected on grounds corresponding to the arguments given above for rejected claim 7 and is similarly rejected.



With respect to claim 15, Liu teaches

"the database for storing the data, the database comprising: a database front end for: receiving a subscription from the client, the subscription selecting a first subset of data from within a set of data" (page 613, first column, seventh paragraph [second example], whereas Liu's notification request is equivalent to the claimed subscription from client);

"generating a subscription plan for filtering the first subset from within the set of data" (page 612, second column, third paragraph, whereas Liu's query Q is equivalent to the claimed subscription plan for filtering);

"receiving a query to be executed at the database, the query changing a second subset of data within the set of data" (page 612, second column, fifth paragraph, whereas Liu's database operations are equivalent to the claimed query received which changes the second subset of data);

"and generating a query plan for executing the query, the query plan for filtering the second subset from within the set of data" (page 612, second column, third paragraph, whereas Liu's new update is equivalent to the claimed received query plan for filtering);

"and a notification manager for: matching the subscription to the query based on the set of data" (page 612, second column, second and third paragraphs, whereas Liu's subsequent executions of Q being performed when a new update occurs and trigger becomes true is equivalent to the claimed matching subscription to the query);

"supplementing the query plan with the subscription plan" (page 615, second column, third paragraph, whereas Liu's omitting the FROM clause when the condition is defined over the same objects as the query component is equivalent to the claimed supplementing of the query plan with subscription plan);

"evaluating the supplemented query plan whereby the query changes the second subset of data and the subscription filters the first subset of data from within the second subset of data to form a third subset of data" (page 612, second column, third paragraph, whereas Liu's run of Q over present data is equivalent to the claimed first subset of data and Liu's subsequent execution of Q performed when a new update occurs are equivalent to the claimed second subset of data);

"determining whether the third subset of data is non-empty; and if the third subset of data is non-empty, then generating a notification of the change to the third subset of data" (page 612, second column, third paragraph, whereas Liu's only new query matches since the previous execution being returned to the user is equivalent to the claimed determination of whether the third subset is non-empty and returning that non-empty subset to the user);

"and if the third subset of data is empty, then not generating a notification of the change to the third subset of data" (optionally recited limitations are not required to be taught by the Office, see MPEP § 2106 Section II(C)).

Liu does not explicitly indicate "the client comprising a cached version of data stored at the database."

However, Zollinger teaches “the client comprising a cached version of data stored at the database” (column 7, lines 14-21, whereas Zollinger’s initial database copy sent to client is equivalent to the claimed client comprising a cached version of data which is stored at the database).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Liu and Zollinger because using the steps “the client comprising a cached version of data stored at the database” would have given those skilled in the art the tools to improve the invention by allowing the client to have a subset of data the data which mirrors the server data. This gives the user the advantage of being able to quickly change the viewable format of the locally cached data without having to query the server each time.

With respect to claim 16,

Liu discloses “the subscription is terminated after the notification is generated” (page 612, second column, third and fourth paragraphs, whereas Liu’s stop condition is equivalent to the claimed subscription being terminated after notification generated).

With respect to claim 17,

Liu discloses “the subscription is persisted after the notification is generated” (page 611, first column, first paragraph, whereas Liu’s query system which includes future data is equivalent to the claimed persisting subscription).

With respect to claim 18,

Liu discloses “the notification manager is further for storing the subscription plan” (page 611, second column, third and fourth paragraphs, whereas Liu’s query specification language in the notification model is equivalent to the claimed storage of subscription plan at notification manager).

With respect to claim 19, Liu discloses

“the database further comprises: an optimizer for generating an execution plan for the query based on the query plan” (page 611, second column, third paragraph, whereas Liu’s query specification language to express event monitoring requests is equivalent to the claimed optimizer for generating the execution plan for query based on query plan);

“an execution engine executing the query” (page 612, second column, third and fourth paragraphs, whereas Liu’s query Q running on the database is equivalent to the claimed query being executed by the execution engine);

“and a storage processor for maintaining data in a storage medium” (page 612, second column, fourth paragraph, where Liu’s database is equivalent to the claimed storage processor which maintains data in a storage medium).

With respect to claim 20,

Liu discloses “the notification manager is further for submitting the notification to the client” (page 611, second column, third paragraph, whereas Liu’s user receiving

notifications in the notification model is equivalent to the claimed notification manager for submitting notification to the client).

### ***Response to Arguments***

2. Applicant's arguments filed 3/22/06 have been fully considered but they are not persuasive.

Applicants argue that Liu does not teach or suggest "supplementing the query plan with the subscription plan; evaluating the supplemented query plan whereby the query changes the second subset of data and the subscription filters the first subset of data from within the second subset of data to form a third subset of data".

The Office respectfully submits that Liu does in fact teach the limitations the Applicant argues, as disclosed previously, and further whereas "supplementing the query plan with the subscription plan; evaluating the supplemented query plan whereby the query changes the second subset of data and the subscription filters the first subset of data from within the second subset of data to form a third subset of data" is equivalent to Liu's executing first run of Q (the past and present data) is the "first subset", the new update event is the "second subset", and the new query matches are the "third subset of data" (page 612, column 2, third paragraph).

In arguments, the Applicant states that Liu does not teach or suggest supplementing or evaluating in any manner the incoming query plans, and then goes on to state that the claimed method is "more efficient" rather "than to evaluate incoming query plans", which Liu does. These statements seem to be a contradiction in the

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argument and confusing when attempting to evaluate and answer the argument. Also of note, the applicant asserts that the claimed method is a "more efficient" than the Liu method, however the efficiency of the method is not claimed but the function described, and the Liu concept is functionally equivalent in regards to the limitations argued.

### ***Conclusion***

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record, listed on form PTO-892, and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay A. Morrison whose telephone number is (571) 272-7112. The examiner can normally be reached on M-F 8-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on (571) 272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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